



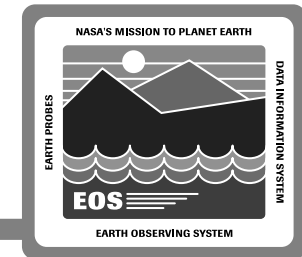
Communications Subsystem (CSS)

Wrap-Up

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18 January 1995

CSS Services Implementation

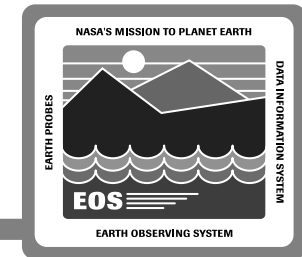


Services	IR-1 or Release A	COTS (W/Glue) ¹ Custom Code	Notes
OBJECT SERVICES			
Directory/Naming	IR-1	COTS	BIND -- DNS; CDS -- DCE
	Release A	Custom Code	GDS -- X.500
Security	IR-1	COTS	Authentication (reuse of APIs from EP4).
	Release A	COTS + Custom Code	Login Service. Remaining Features (include Authorization and Access Control)
Message Passing	IR-1	COTS	Synchronous
	Release A	COTS + Custom Code	Asynchronous & Deferred Synchronous/Requires Messaging Queue COTS.
Event	Release A	COTS + Custom Code	Potential COTS is Project Pilgrim Source Code + Internal Development
Thread	IR-1	COTS	COTS within DCE & OODCE
Time	IR-1	COTS + Custom Code	DCE UTS; internally developed code required as enhancements & glue code
LifeCycle (Initialization / Activation)	Release A	COTS + Custom Code	Potential COTS is Project Pilgrim Source Code + Custom Code required as enhancement and glue code

¹ COTS (W/Glue) -- COTS requires some "glue" code and APIs for encapsulating OODCE

Note: CI for all CSS Services is DCCI

CSS Services Implementation (cont.)



Services	IR-1 or Release A	COTS (W/Glue) ¹ Custom Code	Notes
DISTRIBUTED OBJECT FRAMEWORK (DOF)			
DOF Services	IR-1	COTS	OODCE
	Release A	COTS	OODCE
COMMON FACILITY SERVICES			
Electronic Mail	IR-1	COTS + Custom Code	Mail packages bundled with the operating system, ELM or Pine Is Not Elm (PINE) which are available in public domain. Custom API for application support.
	Release A	Custom Code	Sending messages to a Title.
File Access	IR-1	COTS + Custom Code	File Transfer -- ftp, kftp. Custom File Transfer API.
	Release A	COTS + Custom Code	Remote File Access (DFS/AFS). Custom code for scheduling file transfers.
Bulletin Board (BB)	IR-1	COTS	Reuse BB from EPs.
	Release A	COTS	Based on NNTP & use public domain packages (rn, xrn).
Virtual Terminal	IR-1	COTS	Telnet, kTelnet, X (for viewing graphics).
Event Logger	IR-1	Custom Code	Reuse of APIs from EP4
	Release A	Custom Code	Class Library

¹ COTS (W/Glue) -- COTS requires some "glue" code and APIs for encapsulating OODCE

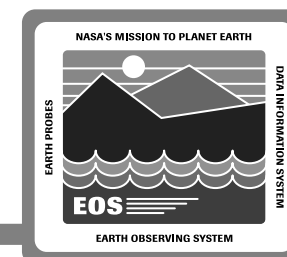
Note: CI for all CSS Services is DCCI

CSS Wrap-Up



Services as required by FOS, SDPS, MSS
Client/Server Development Environment
Cell Topology/Deployment
Scenarios
Technology Migration
Incremental Development
Prototyping

Glossary



ACL	Access Control List	M&O	Maintenance and Operations
AFS	Andrew File System	MR-AFS	Multi -Resident Andrew File System
API	Application Programming Interface	MSS	Management SubSystem
BB	Bulletin Board	NFS	Network File System
BBS	Bulletin Board Service	NNTP	Network News Transfer Protocol
BIND	Berkeley Internet Name Domain	NTP	Network Time Protocol
CDS	Cell Directory Service (part of DCE)	OA	FOS Off-line Analysis process
CORBA	Common Object Request Broker Architecture	OMG	Object Management Group
COTS	Commercial Off The Shelf	OO	Object Oriented
CSMS	Communication and Systems Management Segment	OODCE	Object Oriented DCE
CSS	Communication SubSystem	ORB	Object Request Broker
DAAC	Distributed Active Archive Center	OS	Object Services (CSS building blocks)
DB	DataBase	OSF	Open Software Foundation
DCE	Distributed Computing Environment (from Open Software Foundation)	OSI	Open System Interconnect
DECOM	FOS Decommutation process	PAC	Privilege Access Certificate (DCE term)
DFS	Distributed File System (part of OSF/DCE)	PDR	Preliminary Design Review
DNS	Domain Name System	RFA	Remote File Access
DOF	Distributed Object Framework (CSS infrastructure)	RMP	Reliable Multicast Protocol
DTS	Distributed Time Server (part of DCE)	RPC	Remote Procedure Call
ECS	EOSDIS Core System	SCF	Science Computing Facility
EMail	Electronic Mail	SDPS	Science Data Processing Segment
EP	Evaluation Prototype	SMTP	Simple Mail Transfer Protocol
FOS	Flight Operations Segment	SNMP	Simple Network Management Protocol
ftp	File Transfer Protocol	SQL	Structured Query Language
GDS	Global Directory Service	TCP	Transport Control Protocol
http	HyperText Transfer Protocol	UDP	User Datagram Protocol
IDL	Interface Definition Language	UIOAR	FOS User Interface Off-line Analysis Request process
IET	Interactive Evaluation Tool (SDPS application for EP4)	WWW	World Wide Web
IP	Internet Protocol	X	X protocol
ISS	Internetworking SubSystem	X.500	CCITT Standard for Naming
kerberos	Security protocol developed by MIT; base for DCE security		
kftp	Kerberized File Transfer Protocol		
ktelnet	Kerberized telnet		